Children's Environmental Health

Waterborne Diseases

Measure 11. Population At Risk Served by Public Water Systems
Measure 12. Fecal Coliform Contamination of Private Water Wells
Measure 13. Boil Water Notices and Advisories

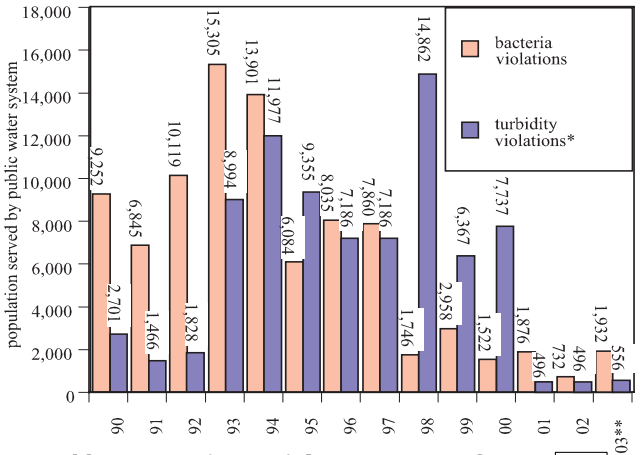
From 1991 to 2000, there were 155 outbreaks and 431,846 cases of reported illness associated with drinking water from public and individual water systems in the U.S.[1] During 1999-2000, 44 waterborne disease outbreaks (18 from private wells, 14 from noncommunity systems, and 12 from community systems) were reported by 25 states.[2] Since private wells and cisterns are not regulated or monitored under federal and state law, they pose the greatest threat to those dependent on these sources of water for drinking. An estimated 42 million people in the U.S. obtain water from private drinking water sources, according the U.S. Geological Survey. In Kentucky an estimated half a million people rely on private wells, springs and cisterns for drinking. The Kentucky Department for Public Health tests private well water for bacteria upon request. During 2001, 59 percent of the 1,291 private water wells tested by local health departments detected fecal coliform, an indication the water may be contaminated.[3] Well owners are advised to have wells tested once a year.

Most public drinking water contamination problems occur in smaller drinking water systems in the state. During 2003, 2,488 Kentuckians were at risk from 13 small public water systems with persistent bacteria and turbidity violations, two of which primarily serve elementary schools. The good news is that the number of Kentuckians served by systems with persistent violations of drinking water standards have declined significantly during the past 10 years.

A greater threat today may be the infiltration of contaminants into drinking water as a result of water line breaks. During 2001, more than 1,800 boil water advisories were issued by public drinking water systems in Kentucky, primarily due to line breaks and loss of pressure.

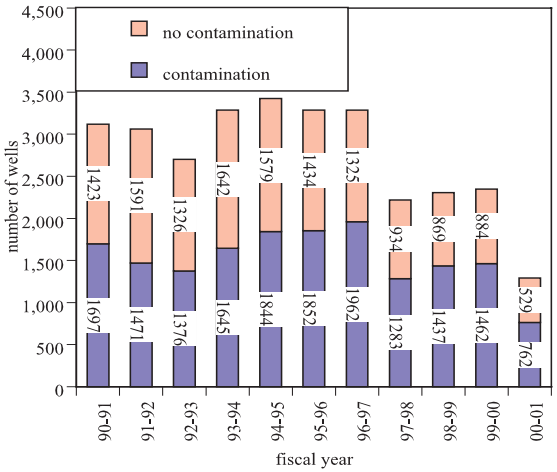
Kentuckians can also be exposed to microbial contamination through the recreational use of waterways. Pathogens are the major source of water pollution in Kentucky, causing 31 percent of the known pollution problems in the state. High levels of fecal coliform bacteria detected in waterways during 2004 prompted the Kentucky Department of Environmental Protection to reissue swimming advisories for 234 miles of waterways the Licking River, the Upper Cumberland River and the Upper Fork of the Kentucky River as well as for waterbodies after a heavy rain .[4]

Indicator 11. Population At Risk Served by Public Water Systems[endnote]



CD - Table 12. ***Persistent violators*** *in Kentucky.*

Indicator 12. Fecal Coliform Contamination of Private Water Wells in Kentucky[endnote]



Indicator 13. Boil Water Notices and Advisories[endnote]